Safety Data Sheet

according to UK REACH Regulation

BOOSTER *R1234ZE *

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

BOOSTER *R1234ZE *

Further trade names

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UFI: H440-F0XN-D006-K5AU

1.2. Relevant identified uses of the substance or mixture and uses advised against

Uses advised against

Reserved for industrial and professional use.

1.3. Details of the supplier of the safety data sheet

Company name:	ITW LLC & Co. KG
Street:	Am Eichenbach 14
Place:	D-73054 Eislingen/Fils
Telephone:	+49 800 6273002
E-mail:	skrautmann@itwindustrialsolutions.com
Contact person:	Produktsicherheit Mo. - Do. 8.00 - 16.30 Fr. 8.00 - 14.00 Telephone: ++49 800 6273002
E-mail:	info@itwindustrialsolutions.com
Internet:	www.itwindustrialsolutions.com
Responsible Department:	Produktsicherheit Mo. - Do. 8.00 - 16.30 Fr. 8.00 - 14.00 Deutschland: Vergiftungs-Informations-Zentrale Freiburg 0761 19240 Swiss Toxicological Information Centre - Téléphone : +41 44 251 51 51 (in Switzerland dial 145) United Kingdom : National Poisons Information Service - Phone number : 8448920111 Österreich : Vergiftungsinformationszentrale Vienna - Telefon-Nummer : +43 1 406 43 43 Schweiz : Tox Info Suisse - Telefon-Nummer : +41 44 251 51 51 España : Instituto Nacional de Toxicología - Teléfono : +34 91 562 04 20 România (Romania): Spitalul de Urgenta Floreasca 021 230 8000 România (Romania): Spitalul de Urgenta Floreasca 021 230 8000 CAV “Ospedale Pediatrico Bambino Gesù” – Roma Tel. (+39) 06.6859.3726 CAV “Azienda Ospedaliera Università di Foggia” – Foggia Tel. 800.183.459 CAV “Azienda Ospedaliera A. Cardarelli” – Napoli Tel. (+39) 081.545.3333 CAV Policlinico “Umberto I” – Roma Tel. (+39) 06.4997.8000 CAV Policlinico “A. Gemelli” – Roma Tel. (+39) 06.305.4343 CAV Azienda Ospedaliera “Careggi” U.O. Tossicologia Medica – Firenze Tel. (+39) 055.794.7819 CAV Centro Nazionale di Informazione Tossicologica – Pavia Tel. (+39) 0382.24.444 CAV Ospedale Niguarda – Milano Tel. (+39) 02.66.1010.29 CAV Azienda Ospedaliera Papa Giovanni XXIII – Bergamo Tel. 800.88.33.00 CAV Centro antiveleni Veneto – Verona Tel. 800.011.858 Slovakia: National Toxicological Information Centre Bratislava +421 2 5465 2307 Czech Republic: Ministry of Health of the Czech Republic Chemical Substances and Biocidal Products Unit +420 267 082 236 Slovakia: National Toxicological Information Centre Bratislava +421 2 5465 2307 Myrkytystietokeskus/HUS 0800 – 147111/ 09-471977

1.4. Emergency telephone number:

Deutschland: ++49 800 6273002
Slovakia: National Toxicological Information Centre Bratislava +421

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Aerosol 3; H229

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Signal word: Warning

Hazard statements

H229 Pressurised container: May burst if heated.

Precautionary statements

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

P251 Do not pierce or burn, even after use.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
29118-24-9	Trans-1,3,3,3-Tetrafluoroprop-1ene			80-100%
	471-480-0		01-0000019758-54	
	Compressed gas; H280			

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

No special measures are necessary.

After inhalation

Provide fresh air. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After contact with skin

After contact with skin, wash immediately with: Water. Change contaminated clothing.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water.

After ingestion

If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

4.2. Most important symptoms and effects, both acute and delayed

No data available

4.3. Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Extinguishing powder. Carbon dioxide (CO2). Foam. Water. Water with tenside additive.

Unsuitable extinguishing media

No data available

5.2. Special hazards arising from the substance or mixture

In case of fire and/or explosion do not breathe fumes.

5.3. Advice for firefighters

Co-ordinate fire-fighting measures to the fire surroundings.

Additional information

In case of fire: Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Provide adequate ventilation. Wear personal protection equipment. Remove all sources of ignition.

For emergency responders

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6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Provide adequate ventilation as well as local exhaustion at critical locations. Avoid contact with eyes and skin.

Advice on protection against fire and explosion

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

Further information on handling

The product will be applied by spraying.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Observe in addition any national regulations!

Further information on storage conditions

none

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls



Individual protection measures, such as personal protective equipment

Eye/face protection

Tightly sealed safety glasses.

Hand protection

EN ISO 374 Tested protective gloves are to be worn: Butyl rubber. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Protective clothing:

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Aerosol
Colour:	colourless
Odour:	characteristic
Boiling point or initial boiling point and boiling range:	-19 °C
Flash point:	No flash point according to standard method.
Auto-ignition temperature:	288-293 °C
Water solubility: (at 20 °C)	0,373 g/L
Density (at 20 °C):	1,18 g/cm³

SECTION 10: Stability and reactivity

10.1. Reactivity

This material is considered to be non-reactive under normal use conditions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

This material is considered to be non-reactive under normal use conditions.

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5. Incompatible materials

Etchant and acids,Alkali (lye), concentrated

10.6. Hazardous decomposition products

Carbon dioxide (CO2), Carbon monoxide, Hydrogen fluoride

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

ATEmix tested

	Dose	Species	Source
LC50, inhalation (vapour) (4 h)	965 mg/l	Rat	

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation dust/mist) > 5 mg/l; ATE (inhalation gas) > 20000 ppm

Irritation and corrosivity

No data available

Sensitising effects

not sensitising.

Carcinogenic/mutagenic/toxic effects for reproduction

No data available

STOT-single exposure

No data available

Aspiration hazard

.

Information on likely routes of exposure

No data available

Specific effects in experiment on an animal

No data available

Additional information on tests

No data available

Practical experience

Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
Based on the available data, the classification criteria are not met

11.2. Information on other hazards

Other information

Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
Based on the available data, the classification criteria are not met

SECTION 12: Ecological information

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

List of Wastes Code - residues/unused products

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

List of Wastes Code - contaminated packaging

150104 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); metallic packaging

Contaminated packaging

Dispose of waste according to applicable legislation.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2
Hazard label:	2.2



Classification code:	5A
Special Provisions:	190 327 625
Limited quantity:	1 L
Transport category:	3
Tunnel restriction code:	E

Other applicable information (land transport)

E0

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2
Hazard label:	2.2



Classification code:	5A
Special Provisions:	190 327 344 625
Limited quantity:	1 L

Other applicable information (inland waterways transport)

E0

Marine transport (IMDG)

14.1. UN number or ID number:	UN1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2
14.4. Packing group:	-
Hazard label:	2, see SP63
Special Provisions:	63, 190, 277, 327, 344, 959
Limited quantity:	See SP277
EmS:	F-D, S-U

Other applicable information (marine transport)

E0

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2.2

Hazard label: 2.2



Special Provisions: A98 A145 A167
Limited quantity Passenger: 30 kg G
IATA-packing instructions - Passenger: 204
IATA-max. quantity - Passenger: 75 kg
IATA-packing instructions - Cargo: 204
IATA-max. quantity - Cargo: 150 kg

Other applicable information (air transport)

E0
: Y204

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No data available

14.7. Maritime transport in bulk according to IMO instruments

Keine weiteren relevanten Informationen verfügbar.
No further relevant information available.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3

National regulatory information

Water hazard class (D): - - non-hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms

Aerosol: Aerosols
Compressed gas

Relevant H and EUH statements (number and full text)

H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)